Enclosure B

Anadromous Fish Non-Discretionary Project List for FY 1998

Project 91-051-00: Run Timing Predictions For The Columbia River Basin Including Individual ESA Demes And Analysis Of Tagging Data

BPA Contact: Pat Poe

FY98 Need: $310,000

FY97 CBFWA Recommendation: $0
FY97 Funding: $192,000 from carryover of unspent FY96 administrative funds

Need: This project provides technical assistance to BPA and the region, by developing information and technical analysis and decision support tools that are vital to in-season decision making on Federal Columbia River Power System operations which benefit fish passage and survival. In addition, these tools maintain and enhance monitoring, evaluation, and adaptive management capabilities for the Columbia River Fish and Wildlife Program.

This project includes tasks to analyze and interpret tagging data in ways that other research entities currently do not perform. This project performs analysis and integration of historic and in-season mainstem migration timing data collected by the Smolt Monitoring Program and other mainstem research projects on wild and hatchery-reared salmonid smolts, with emphasis on Snake River wild threatened or endangered stocks. This project has developed new approaches and tools which generate on-line Internet-based information including real-time in-season predictions of the general migration status of Columbia and Snake River smolt outmigrations. This project provides an added value to historical tagging data by testing hypotheses, estimating parameters, and modeling interrelationships without the tremendous costs of additional field studies. Information is being supplied to help design and direct future research efforts and determine reliability of existing information. Historical data has and continues to be explored to reveal possible relationships between ambient river conditions and salmonid survival, outmigration timing, speed, and outmigration success. These analyses also provide information to the PATH process that is currently reviewing available information and assessing future information needs.

Project 89-107-00: Epidemiological Survival Method

BPA Contact: Pat Poe

FY98 Need: $180,000

FY97 CBFWA Recommendation: $150,000
FY97 Funding: *$150,888*

Need: This project provides direct technical and analytical support to major user group needs related to the conduct of Columbia River juvenile and adult survival studies. This project developed the initial study designs for the National Marie Fisheries Service (NMFS/University of Washington (UW) Snake river survival studies of 1993-present (e.g. NMFS Project 93-029-00). Data generated by these survival studies are being used to monitor outmigration success, provide baseline information to evaluate future mitigation measures, update Columbia River models and investigate river management decisions such as flow augmentation and spill programs.

Continuing support is needed to respond to major user group needs for existing and improved survival estimation analyses. In addition, as the new 134.2 kHz frequency detectors are installed, the survival studies will be extended to the joint analysis of survival of both downriver smolts and returning adults. This project has developed some of the key statistical software to analyze this data. Resulting improved monitoring and evaluation capabilities will assist in-season river management in optimizing operational and fish passage strategies to maximize survival through the FCRPS.

Project 96-019-00 (1997 Proposal): Second-Tier Database Support for Ecosystem Focus

BPA Contact: Dave Askren

FY98 Need: $60,000 - $100,000 (The lower figure will provide only minimal continuity of the existing services. The higher value allows improvements and further development.)

FY97 CBFWA Recommended: $0
FY97 Funding: No funding was provided directly to this project number, however, approximately $60,000 was provided as a component of other projects at UW, which were funded through carryover of unspent FY96 administrative funds.

Need: This project provides single-point, Internet-based access to a subset of fishery, hydraulic, project operation, and environmental information vital to in-season decision making on operations of the Federal Columbia River Power System. This complements, but does not duplicate, existing historical and in-season database services provided by Project 88-108-04 (StreamNet), Project 94-033-00 (Fish Passage Center), and other regional databases by accumulating certain datasets that are reported only in single- or several-day reports from regional, primary data sources. This project also reduces user impacts to Project 90-080-00 (PITAGIS) which prioritizes data polling and quality control over data analysis and presentation. A second-tier database adds value to a dataset by providing ease of access and pathways for analysis.

This project provides database services critical to the Corps of Engineer's TMT internet services which are used by federal, state, and tribal entities throughout the year. This project also generates historical and inseason datasets critical to Project 91-051-00 (Run Timing Predictions for the Columbia River Basin Including Individual ESA Demes) which generates on-line, Internet-based forecasts of inseason passage stage for ESA stocks considered by the TMT. These forecasts will be one data element included in the Internet-based administrative record of the TMT.

These services may be provided under competitive bid by either existing information services within the F&W Program or through other sources.

Project 93-037-01: Technical Assistance with the Life Cycle Model

BPA Contact: Jim Geiselman

FY 98 Need: $190,000

FY97 CBFWA Recommendation: $60,000
FY97 Funding: $115,000 including $75,000 from carryover of unspent FY96 administrative funds.

Need: This project provides BPA's only technical support for life-cycle modeling, and is in part a substitute for not refilling an internal position. The project provides statistical and life-cycle analyses for retrospective and prospective PATH tasks, and includes a subcontract with Beak Consultants for data management and analyses. In particular, this project will collect data and perform analyses to help distinguish among hypotheses regarding past effects of hydro operations and habitat conditions. It also will develop methods to monitor effects of future hydro, habitat, hatchery, and harvest management actions, and to distinguish those effects from naturally occuring variations in climate and other non-management factors.

Project 96-017-00: Technical Support for PATH

BPA Contact: Jim Geiselman

FY98 Need: $110,000

FY97 CBFWA Recommendation: $60,000
FY97 Funding: $60,000 (The FY97 need was for $110,000. Since only $60,000 was available, the contract period was shortened from 12 to 6 months in order to provide the same level of effort as full funding.)

Need: This is a technical support contract for PATH work. The primary work is by Al Giorgi of BioAnalysts Inc. (previously Chapman Consulting), an active PATH participant, in analyses of hydro related hypotheses. Some additional technical support and scientific review for PATH is also being provided under this contract. This project provides expertise in mainstem passage data, research, and analyses for the hydro subgroup within PATH. In particular, expertise regarding availability and quality of historic passage data for spring and fall chinook is provided, enabling results of the subgroup to be achieved more effectively and efficiently.

Project 92-032-00: Life Cycle Model Development and Application to System and Subbasin Planning In the Snake River Basin

BPA Contact: Jim Geiselman

FY98 Need: $70,000

FY97 CBFWA Recommendation: $65,000
FY97 Funding: $65,000

Need: This project, with the USDA Forest Service, provides life cycle analyses support, habitat analyses for Model Watershed projects, and PATH support. It improves the decision-support tools for assessing overall program effectiveness and for assessing more specific impacts of land-use activities on resident and anadromous salmonids. This work is expected to provide a better understanding of fish-land relations using existing data, to develop protocols for improved data collection, to provide a set of tools for spatial analysis that could be adapted for a variety of applications, and to improve on available methods for viability analysis.

Project 97-010-00: Transition Project for PIT Tag Detection
(formerly project #83-319-01)

BPA Contact: John Rowan

FY98 Need: $3,000,000

FY97 CBFWA Recommendation: $750,000 (The FY97 component focused on field testing of the new detectors, and did not begin the transition phase.)
FY97 Funding: $750,000

A functional and well-maintained detection system is fundamental to performing mainstem research, monitoring, and evaluation. This project changes out the old 400 kHz stationary monitors on the mainstem Columbia and Snake Rivers and replaces them with the new 134.2 kHz frequency. The ability to maintain the existing system for an extended period of time is extremely limited. As a result, the transition is essential to ensure the region is able to continue collecting PIT tag data. A considerable amount of time and money has been expended in developing and testing prototype monitors, and the implementation phase is about to begin. Deferring the change-over would add to the total costs, rather than decrease them.

<u>Project 89-108-00:</u> Monitoring and Evaluation Modeling Support - (formerly the CRiSP Project)

BPA Contact: Jim Geiselman

FY98 Need: $350,000

FY97 CBFWA Recommendation: $0
FY97 Funding: $289,000 from carryover of unspent FY96 administrative funds

AND

<u>Project 97-002-00:</u> PATH - UW Technical Support

BPA Contact: Jim Geiselman

FY98 Need: $400,000

FY97 CBFWA Recommendation: $200,000
FY97 Funding: $300,000 including $100,000 from carryover of unspent FY96 administrative funds.

Need: These contracts provide analytical capabilities and analyses needed for fish mitigation and fish impact assessments required of BPA and other federal agencies for compliance with ESA, NEPA, and the NW Power Act. The contracts provide critical information needed to help focus mitigation efforts on fish results with efficient use of limited mitigation funds on both a real time and planning horizon basis. Much of this work is currently both direct and indirect support for PATH efforts.

The purpose of these projects is to develop and apply analytical tools to assist BPA and regional fisheries agencies to more effectively integrate hydrosystem operations with smolt and adult fish passage. The work involves development of models, databases, and Internet pages; in-season application of these tools; maintaining a database for adult passage data; and making in-season and post-season analyses.